

DOCUMENT RESUME

ED 281 111

CG 019 845

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TITLE Situational Salience as a Determinant of Expectations
in Experimental Games.
PUB DATE Apr 87
NOTE 24p.; Paper presented at the Annual Meeting of the
Western Psychological Association (67th, Long Beach,
CA, April 23-26, 1987).
PUB TYPE Reports - Research/Technical (143) --
Speeches/Conference Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Attribution Theory; *Behavior Patterns; College
Students; *Competition; *Cooperation; Environmental
Influences; *Games; Individual Differences;
Personality Traits; Two Year Colleges
IDENTIFIERS *Prisoners Dilemma Game; *Situational Salience

ABSTRACT

Previous research provides support for two distinct models of expectation behavior in experimental games. The similarity pattern describes expectations that are similar to the actor's behavior regardless of whether the actor is cooperative or competitive. The triangularity pattern describes expectations that are both similar and dissimilar to cooperator's behavior and expectations that are only similar to competitor's behavior. In an attempt to reconcile these two positions, it was suggested that variations in the measurement context may create differences in situational salience which then affects both expectational patterns and attributional tendencies of the subjects. Undergraduate students participated in an experiment involving the Prisoners Dilemma game which varied whether or not measurements were taken "in the situation" or "out of the situation." It was predicted that, while competitors would not vary, cooperators would show similar expectations and make environmental attributions in the situation and show heterogeneous expectations and make dispositional attributions out of the situation. These predictions were confirmed for cooperators and an attributional analysis was used to further explain the results. (Author/NB)

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1

Situational Salience as a Determinant of Expectations in Experimental Games

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1987

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Abstract

Previous research provides support for two distinct models of expectation behavior in experimental games. The similarity pattern describes expectations that are similar to the actor's behavior regardless of whether the actor is cooperative or competitive. The triangularity pattern describes expectations that are both similar and dissimilar to cooperators behavior and expectations that are only similar to competitors behavior. In an attempt to reconcile these two positions, it was suggested that variations in the measurement context may create differences in situational salience which then effects both expectation-al patterns and attributional tendencies of the subjects. In an experiment which varied whether or not these measurements were taken "in the situation" or "out of the situation" it was predicted that, while competitors would not vary, cooperators would show similar expectations and make environmental attributions in the situation and show heterogeneous expectations and make dispositional attributions out of the situation. These predictions were confirmed for cooperators and an attributional analysis was presented to further explain the results.

Situational Saliience as a

Determinant of Expectations in Experimental Games

One of the essential aspects of social interdependence that experimental games¹ seem to emphasize is that behavior and behavioral prediction go hand in hand. Individual behavior in a dyadic circumstance, be it cooperative or competitive, thus cannot be fully appreciated without some consideration of the expectations one holds as to the other's behavior. A major question, however, concerns the degree of heterogeneity in the pattern of expectations with respect to one's own behavior or behavioral preference. Over the past fifteen years there appear to be two fundamental views taken in the literature, each stressing different dispositional or situational sources of expectational patterns.

The first position, termed the similarity pattern, rests on the hypothesis that perception of others mirrors self-perception regardless of the individual's disposition or motivational orientation. Proponents of this view argue that the individual's decision to compete or cooperate is controlled by factors present in the immediate situation: incentive structure, number of trials, range of response options, number of players, etc. Since a dispositional component is not determinant in the decision to cooperate or compete, the specific situational components determine both one's own behavior and expectations of other's behavior. This position has been supported by results from many studies (Codol, 1976; Dawes, McTavish, & Shaklee, 1975; Kuhlman

& Wimberly, 1976; Messe & Sivacek, 1979; Miller & Holmes, 1976; Orbell, Schwartz-Shea, & Simmons, 1983; Simmons, Dawes, & Orbell, 1983; Tyszka & Grzelak, 1976; Van de Kragt, Orbell, & Dawes, 1983.) The basic finding from the studies supporting the similar expectations pattern are such that both cooperators and competitors expect others to be similar to self, suggesting a simple and direct relation between behavior and expectations.

The other position, following the research of Kelley and Stahelski (1970c) has been termed the triangularity pattern. Kelley and Stahelski conclude that a dispositional characteristic known as motivational orientation (MO) has differential effect on expectations of others' behavior in game settings. Competitively oriented individuals follow the position described above: perception of others mirrors self-perception, and thus competitors expect others to compete. Cooperatively oriented individuals, however, do not follow the above described position. Cooperators do not necessarily expect others to cooperate, and cooperator expectations vary across the cooperator-competitor continuum. The Kelley and Stahelski position has also received support in the literature (Kelley et al., 1970; Kelley & Stahelski, 1970b, 1970c; Kuhlman & Marshello, 1975a; Kuhlman & Wimberly, 1976; Miller & Holmes, 1976; Schlenker & Goldman, 1978; Bixinstine, Lowenfeld, & Engelhart, 1981; Misra & Kalro, 1979; Stahelski & Kelley, 1969; Stahelski, 1981.) The term triangularity pattern is applied to Kelley and Stahelski because, as Figure 1 indicates, their data

relating motivational orientation to expectations of others formed a triangular upper right 90 degree angled scatter plot.

Insert Figure 1 about here

Close observation of these two groups of studies, however, reveals a crucial point of distinction. Those supporting the similarity pattern have, for the most part, assessed motivational orientation in terms of game specific behavior (e.g., one's own cooperative or competitive choices.) By contrast, those studies supporting the triangularity pattern have employed referents to motivational orientation and expectations that are non-specific to any particular game (e.g., one's stance toward "typical others" in conflict situations.) In brief there seem to be important differences in the saliency of the game situation that may determine which of the two basic expectational patterns are found.

The hypotheses for the present study are derived from the familiar connection between that situational saliency and attributional behavior (Jones and Nisbett, 1972; Taylor and Fiske, 1978.) Specifically, when the saliency of a particular situation is high, (e.g., when specific moves in a specific game are focused upon in measurement,) subjects will tend to make environmental attributions and thus will also be inclined to predict similar behavior from others. Otherwise, when it is low, (when motivational orientation and expectations are measured where subjects are relatively "outside"

of specific behavioral choices,) subjects will be more likely to consider a variation of dispositional characteristics in making attributions. It is in this latter circumstance that we expect heterogeneous expectations, (and thus triangularity,) to occur. It should be clear, however, that the central thrust of this hypothesis really concerns those people who are deemed to have cooperative motivational orientation. While competitive subjects should show similar expectations regardless of situational saliency, it is the cooperators whose expectational patterns should vary as a function of situational saliency.

Specifically, cooperators should show a similarity expectational pattern when situational saliency is high and show a heterogeneous expectational pattern when it is low. These patterns should be reflected in attributional behavior as well, with cooperators showing a distinctive increase in dispositional, (as opposed to environmental,) explanations as specific situations become less salient.

In the experiment to follow situational saliency was manipulated by having subjects either respond to a proposed game situation when forming expectations and attributions of others behavior or respond in a generalized manner to typical others and typical situations which they might imagine.² In short, half the subjects were "in the situation" and the other half were "out of the situation." Cooperative subjects in the situation are

hypothesized to show similarity expectation patterns and environmental attributions. Cooperative subjects out of the situation are hypothesized to show triangularity expectation patterns and dispositional attributions.

Method

Sample

The subjects were undergraduate female and male students taking introductory psychology at Mt. Hood Community College. Subjects were not paid for their participation, nor was their participation required as part of the course. The experimenter simply requested their participation and the subjects agreed.

Procedure

At the beginning of the experimental hour all subjects were in a large classroom. The experimenter randomly assigned all subjects to either the "in the situation" condition or the "out of the situation" condition. The "in the situation" subjects were then taken to a nearby empty classroom by the experimenter, while the "out of the situation" remained in the original classroom with a laboratory assistant.

In the Situation. As the "in the situation" subjects entered the room, they were randomly assigned to a desk seat. These desks were arranged so that each subject was facing another subject, indicating possible dyadic interaction.

At this point the basic rules of the two-person Prisoners

Dilemma were explained, indicating to the subjects the point consequence of each of the four combinations of moves. After the rules were explained and questions answered, subjects were asked to indicate whether they wanted to be competitive or cooperative in the forthcoming dyadic interaction. The subjects were then asked to indicate whether the other person would be competitive or cooperative in the interaction. Finally, the subjects were asked whether the other person's behavior would be determined by the person's basic personality traits or by the environmental demands of play in the game.

Once all subjects had answered all three questions, the experimenter collected the questionnaire, and informed the subjects that they would not actually be playing the interaction game, and that the experiment was over. The experimenter debriefed the subjects, answering questions concerning the hypotheses and the need to convince the subjects that they would actually be playing the game. All subjects indicated that they were convinced that they would be playing the game after they completed the questionnaire.

Out of the Situation. After the "in the situation" subjects left the original classroom, the laboratory assistant explained the basic rules of a hypothetical generic two-person Prisoners Dilemma, indicating to the subjects the goal attainment consequences of the same four combinations of moves that were explained to the "in the

situation" subjects. The subjects were then asked to indicate whether they were usually competitive or usually cooperative in most situations dealing with others; to indicate whether the typical person was generally cooperative or competitive; and to indicate whether the typical person's behavior was determined by personality traits or environmental demands.

The reader will have noted both the differences and the similarities between the two instructional sets. The authors wanted both groups of subjects to be equally aware of the general logic of a mixed motive dilemma, accounting for the similarity in the two instruction sets. If both groups were equally aware of dilemma logic, then differences between the groups could be attributed to how specifically salient the situation is, rather than to a differential understanding of the kind of interpersonal conflict considered.

Results

It can be readily noted in Tables 1 and 2 that the sample for this study yielded substantially more cooperators than competitors on the critical measure of motivational orientation. We can only speculate whether the group atmosphere prevailing in the experiment led to this higher incidence of the cooperative choice. However, the fact that 80% of the subjects described themselves as cooperators, (in both conditions,) was not fully unwelcome since the focal point of the inquiry did concern how cooperators would react to variations of situational salience. Even though the number of

competitors was quite small, a Fischer's Exact Probability test established that there were no significant differences for competitors in or out of the situation on either of the measures taken.

The central prediction of the study was that both cooperators and competitors would have expectations of others behavior that were similar to their own motivational orientation when situational saliency was high, that is when they were actually in the game situation. On the other hand, it was predicted that cooperators only would have heterogeneous expectations, (in support of the triangularity pattern,) when situational saliency was low or when they were out of the game situation and expressing only generalized plans and expectations.

In Table 1 it can be seen that cooperators indeed did have predominantly similar expectations in the actual game situation but show an even split of similar and dissimilar expectations outside of it. A specific chi-square test with cooperators alone across situation and expectations, ($\chi^2 = 12.09$ $p < .01$), confirms the essential point, that cooperators tend toward similar expectations "in the situation" but make more heterogeneous expectations "outside of the situation."

It was also predicted that situational saliency would be associated with the subjects attributional tendencies, namely whether they felt the other's behavior was best explained by the

demands of the environment or by dispositional characteristics. Here again, as is shown in Table 2, the focus is upon cooperator responses which are a mixture of both dispositional and environmental attributions in the situation but quite dominantly dispositional out of the situation. This observation is confirmed through chi-square analysis on cooperators by a significant situational saliency by attributional response, ($\chi^2 = 4.41$ $p < .05$.) In other words, as predicted, (and quite consistent with the attributional logic for employing the concept of situational saliency,) these results appear to show that cooperators have the strongest tendency toward dispositional attributions out of the situation and a stronger tendency toward environmental attributions in the situation. We did not find, however, evidence of a significant association for cooperators between expectational patterns and attributional tendencies.

Discussion

The data obtained here gives us a partial, but not yet a complete, picture of the complex relationship of situational saliency and expectational patterns. We now have strong evidence that situational saliency affects not only expectational patterns but associated attributional tendencies as well. However, we are not yet clear as to how those tendencies mediate expectational behavior. Cooperators out of the situation, we have observed, are inclined towards dispositional inferences and heterogeneous

expectations, and yet a more complete process relating the two can only be assumed: that the tendency to make dispositional inferences, once in place, leads to an expected diversity of both cooperative and competitive possibilities in others.

In short, it would seem that there is considerably more to learn concerning how triangularity of expectations comes about. Cooperators, unlike competitors, seem highly responsive to the saliency bias of game situations. We note that cooperators, as observed in this study, show a certain parallel with the well known actor/observer distinction of Jones and Nisbett, (1972.) This is to say that in the situation they seem to function much like actors, showing a greater inclination to invoke environmental causes to explain behavior. Out of the situation, by contrast, they seem to function like observers, showing decided inclination to invoke dispositional explanations. The problem still remains, however, of understanding why some "observers," (e.g., cooperators out of the situation,) develop similar expectations and why some develop dissimilar expectations.

Clarification of the manipulation of situational saliency is also now a necessary next step in this research. As footnoted earlier, the operational definition employed here followed a fundamental point of contrast in the literature on expectational patterns, but certainly can be explored more systematically. From the findings obtained here it cannot be determined whether the effect of situational saliency is due to the specificity of the game, (e.g.,

type of choices, number of trials, number of players, incentives, etc.,) or the particular person's participation in it. Thus, for example, it is possible that the homogeneity obtained in the situation is largely a specific person effect while the heterogeneity obtained out of the situation is a nonspecific person effect. Thus speculation, of course, cannot be verified until saliency of the situation and saliency of persons are manipulated independently.

To summarize, our evidence does suggest that reduced saliency of a game situation does lead to more heterogeneous expectations, but as saliency increases, similar expectations become more likely. However, we must temper our observations by acknowledging that there are numerous parameters yet to explore before we are fully able to establish how expectational patterns are developed. It is a problem which poses a significant challenge because, like so many other in social psychology, it requires us to probe the continuous interplay of human dispositions and environmental circumstances.

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Footnotes

¹The most frequently used experimental game is the prisoners dilemma. The prisoners dilemma is a two choice, (to cooperate or to compete,) non-zero sum game, such that the totals for the players in each cell do not necessarily add to zero. A prisoners dilemma is also defined by the following matrix rules: The competitive exploitation payoff is highest; the mutual cooperation payoff is second highest; the mutual competition payoff is third highest; and the cooperative sucker's payoff is lowest. The prisoners dilemma has traditionally been a two-player game, however in recent years the more than two-player n-person prisoners dilemma, (also known as the Commons Dilemma,) has gained popularity as an experimental vehicle.

²The reader will note that the manipulation of salience encompasses more specific parameters, (e.g., game contextual cues, choices, persons, etc.,) which could be more systematically analyzed. As is taken up in the discussion the authors see this as a task for subsequent research, and have elected to focus for the present on a basic distinction in game situations suggested by the existing literature.

Table 1

Expectations of Others Behavior

Cooperators		
	Same	Different
	as	from
	self	self
In		
situation	31	4
Out of		
situation	13	14

(table continues)

Situational Salience

20

Competitors

	Same	Different
	as	from
	self	self
In		
situation	2	3
Out of		
situation	6	0

χ^2 (situational salience by expectation response) for cooperators
only = 12.09 $p < .01$. Competitors, N.S.

Table 2

Attributional Expectations of Others Behavior

Cooperators

	Disposition	Environment
In		
situation	20	15
Out of		
situation	22	5

(table continues)

Situational Saliience

22

Competitors

Disposition Environment

In

situation

3

2

Out of

situation

4

7

χ^2 (situational saliience by attributional response) for
cooperators = 4.41 $p < .05$. Competitors N.S.

Figure Captions

Figure 1. The relationship of own orientation to expectation of others orientation for the triangularity pattern.